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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/624,511

07/23/2003

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EXAMINER

HAILE, FEBEN

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

05/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/624,511	Applicant(s) CEREDA ET AL.	
	Examiner Feben M. Haile	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In view of applicant's amendment filed April 14, 2008, the status of the application is still pending with respect to claims 1-11.

2. The amendment filed is insufficient to overcome the rejection of claims 1-11 based upon Sawdey et al. (US 2003/0179052), Fiedziusko et al. (US 6,472,951), in combination with newly discovered reference Tsunoda et al. (US 2002/050873) as set forth in this Office action because: the material added to the claims fail to further clarify a distinction between the Applicants invention and the cited references, thus the subject matter is not patentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 6-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Sawdey et al. (US 2003/0179052), hereinafter referred to as Sawdey, in view of Tsunoda et al. (US 2002/050873), hereinafter referred to as Tsunoda.

Regarding claim 1, Sawdey discloses a manifold (**figure 1 and page 2 paragraph 0015; a manifold 36**), filter ports and filter means, with each filter being

connected to the manifold at a corresponding one of said ports (**figure 1 and page 2 paragraph 0015; bandpass filters 56, 58, and 40 are connected to the manifold 36 through input/output ports**), wherein said filter means comprises: at least one filter comprising a first resonant cavity and a further resonant cavity (**figure 2 and page 2 paragraph 0018; the bandpass filters may be constructed with two cavities**), and at least one filter head having only a single resonant cavity which this the same as the first resonant cavity of said at least one filter (**figure 2 and page 2 paragraph 0018; the filter is separated into two parts by a transverse wall, with each side having the cavity; i.e. it would have been obvious to one having ordinary skill in the art at the time the invention was made that the filter 40 separated into two parts by a transverse wall could be a filter head and a filter tail**).

Sawdey fails to explicitly suggest wherein said at least one filter head is configured as to be selectively connectable either to a corresponding covering for short circuit purposes or to a filter tail in order to provide full filter functionality.

Tsunoda teaches wherein said at least one filter head is configured as to be selectively connectable either to a corresponding covering for short circuit purposes or to a filter tail in order to provide full filter functionality (**page 1 paragraph 0011 and page 2 paragraphs 0016-0017; a filtering device including a switch for selectively operating in an open or short circuit manner**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of the filtering device taught by Tsunoda into the multiple channel routing multiplexer disclosed by Sawdey. The motivation for

such a modification is an improved filtering device in a form with a reduced size at a low cost without having to use conventional circuit elements.

Regarding claim 2, Sawdey discloses wherein the at least one filter head comprises at least a first coupling in addition to said first cavity (**figure 3 and page 2 paragraph 0018; each bandpass filter includes a cavity and a coupling aperture**).

Regarding claim 3, Sawdey discloses wherein the at least one filter head further comprises a second coupling (**figure 3 and page 2 paragraph 0018; each bandpass filter includes a cavity and a coupling aperture; it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the filter 40 connects to the manifold 36 and the manifold 34 there would have to be 2 coupling apertures**).

Regarding claim 4, Sawdey discloses wherein the at least one filter head is an integral part of the manifold (**figure 1 and page 2 paragraph 0015; bandpass filter 40 interconnects the manifold 36 to the manifold 34**).

Regarding claim 6, Sawdey discloses a manifold (**figure 1 and page 2 paragraph 0015; a manifold 36**), filter ports and filter means, with each filter being connected to the manifold at a corresponding one of said ports (**figure 1 and page 2 paragraph 0015; bandpass filters 56, 58, and 40 are connected to the manifold 36 through input/output ports**), wherein said filter means comprises: at least one filter comprising a first resonant cavity and a further resonant cavity (**figure 2 and page 2 paragraph 0018; the bandpass filters may be constructed with two cavities**), and at least one filter head having only a single resonant cavity which this the same as the

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first resonant cavity of said at least one filter **(figure 2 and page 2 paragraph 0018; the filter is separated into two parts by a transverse wall, with each side having the cavity; i.e. it would have been obvious to one having ordinary skill in the art at the time the invention was made that the filter 40 separated into two parts by a transverse wall could be a filter head and a filter tail).**

Sawdey fails to explicitly suggest wherein said at least one filter head is configured as to be selectively connectable either to a corresponding covering for short circuit purposes or to a filter tail in order to provide full filter functionality.

Tsunoda teaches wherein said at least one filter head is configured as to be selectively connectable either to a corresponding covering for short circuit purposes or to a filter tail in order to provide full filter functionality **(page 1 paragraph 0011 and page 2 paragraphs 0016-0017; a filtering device including a switch for selectively operating in an open or short circuit manner).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of the filtering device taught by Tsunoda into the multiple channel routing multiplexer disclosed by Sawdey. The motivation for such a modification is an improved filtering device in a form with a reduced size at a low cost without having to use conventional circuit elements.

Regarding claim 7, Sawdey discloses wherein the at least one filter head comprises at least a first coupling in addition to said first cavity **(figure 3 and page 2 paragraph 0018; each bandpass filter includes a cavity and a coupling aperture).**

Regarding claim 8, Sawdey discloses wherein the at least one filter head further comprises a second coupling (**figure 3 and page 2 paragraph 0018; each bandpass filter includes a cavity and a coupling aperture; it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the filter 40 connects to the manifold 36 and the manifold 34 there would have to be 2 coupling apertures**

Regarding claim 9, Sawdey discloses wherein the at least one filter head is an integral part of the manifold (**figure 1 and page 2 paragraph 0015; bandpass filter 40 interconnects the manifold 36 to the manifold 34**).

Regarding claim 10, Sawdey discloses the at least one filter head is made through standard waveguide technology, and the corresponding at least one filter tail is made by a technology selected from the group consisting H-plane technology and DR technology to make the device more compact (**page 2 paragraph 0017; each manifold is constructed of a section of a waveguide of rectangular cross-section; as the claims are interpreted in their broadest sense, the Examiner believes that the waveguide could have been implanted using a standard technology H-Plane**).

Regarding claim 11, Sawdey discloses a branching unit comprising one or more reconfigurable multiplexers (**figure 1 and page 2 paragraph 0014; a satellite carries electronic equipment that includes a multiplexer with interconnect able manifolds**).

4. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Sawdey et al. (US 2003/0179052), hereinafter referred to as Sawdey, in view of Tsunoda et al. (US 2002/050873), hereinafter referred to as Tsunoda, in view of Fiedziuszko et al. (US 6,472,951), hereinafter referred to as Fiedziuszko.

Regarding claim 5, Sawdey as modified by Tsunoda disclose the limitations of the base claim.

Sawdey, Tsunoda fails to explicitly suggest wherein the covering plate is at a distance with respect to the manifold axis.

Fiedziuszko teaches t wherein the covering plate is at a distance with respect to the manifold axis **(figure 1 and column 2 lines 39-46; a multiplexer assembled with waveguides, including cavity filters, coupled to a manifold, column 2 lines 60-62; where the waveguides are positioned along the longitudinal dimension of the manifold at distances z, y, and z, respectively from a short 18).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the manifold spacing adjustment taught by Fiedziuszko into the multiple channel routing multiplexer disclosed by Sawdey as modified by the method of the filtering device suggested by Tsunoda. The motivation for such a modification is to assist in the tuning of the overall system thereby optimizing performance of the multiplexer while minimizing losses.

Response to Arguments

5. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fabens M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aunt S. Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fabens M Hailer/
Examiner, Art Unit 2616

/Aunt S. Moe/
Supervisory Patent Examiner, Art
Unit 2616

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